

## SAFETY DATA SHEET

**Product Trade Name:** ZoneSeal® 3000

**Revision Date:** 14-Feb-2017

**Revision Number:** 11

### 1. Identification

#### 1.1. Product Identifier

**Product Trade Name:** ZoneSeal® 3000  
**Synonyms** None  
**Chemical Family** Protein  
**Internal ID Code** HM004815

#### 1.2 Recommended use and restrictions on use

**Application** Foaming Agent  
**Uses advised against** No information available

#### 1.3 Manufacturer's Name and Contact Details

Halliburton Energy Services, Inc.  
645 - 7th Ave SW Suite 1800  
Calgary, AB  
T2P 4G8  
Canada  
Telephone: 1-403-231-9300

#### Manufacturer/Supplier

Halliburton Energy Services, Inc.  
P.O. Box 1431  
Duncan, Oklahoma 73536-0431  
Telephone: 1-281-871-6107

#### Prepared By

Chemical Stewardship  
Telephone: 1-281-871-6107  
e-mail: fdunexchem@halliburton.com

#### 1.4. Emergency telephone number

**Emergency Telephone Number** 1-866-519-4752 or 1-760-476-3962  
Global Incident Response Access Code: 334305  
Contract Number: 14012

### 2. Hazard Identification

#### 2.1 Classification of the substance or mixture

As adopted by the competent authority, this product does not require an SDS or hazard warning label.

Not classified

#### 2.2. Label Elements

##### Hazard Pictograms

**Signal Word:** Not Classified

**Hazard Statements** Not Hazardous

##### Precautionary Statements

<b>Prevention</b>	None
<b>Response</b>	None
<b>Storage</b>	None
<b>Disposal</b>	None

**2.3 Other hazards which do not result in classification**

None known

**3. Composition/information on Ingredients**

Substances	CAS Number	PERCENT (w/w)	GHS Classification - Canada	HMIRA Registry Number	Filing Date	Decision Granted Date
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	80 - 100%	Not classified	Not applicable	Not applicable	Not applicable

The exact percentage (concentration) of the composition has been withheld as proprietary.

**4. First aid measures****4.1. Description of first aid measures**

<b>Inhalation</b>	If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
<b>Eyes</b>	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
<b>Skin</b>	Wash with soap and water. Get medical attention if irritation persists.
<b>Ingestion</b>	Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

**4.2 Most important symptoms/effects, acute and delayed**

No significant hazards expected.

**4.3. Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically. No specific antidote.

**5. Fire-fighting measures****5.1. Extinguishing media****Suitable Extinguishing Media**

Water fog, carbon dioxide, foam, dry chemical.

**Extinguishing media which must not be used for safety reasons**

None known.

**5.2 Specific hazards arising from the substance or mixture****Special exposure hazards in a fire**

Decomposition in fire may produce harmful gases.

**5.3 Special protective equipment and precautions for fire-fighters****Special protective equipment for firefighters**

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

**6. Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Use appropriate protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation.

See Section 8 for additional information

**6.2. Environmental precautions**

Prevent from entering sewers, waterways, or low areas.

**6.3. Methods and material for containment and cleaning up**

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove.

**7. Handling and Storage**

**7.1. Precautions for safe handling**

**Handling Precautions**

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage Information**

Store away from oxidizers. Keep container closed when not in use. Store in a dry location. Product has a shelf life of 24 months.

**8. Exposure Controls/Personal Protection**

**8.1 Occupational Exposure Limits**

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	Not applicable	Not applicable

**8.2 Appropriate engineering controls**

**Engineering Controls** Use in a well ventilated area.

**8.3 Individual protection measures, such as personal protective equipment**

**Personal Protective Equipment** If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

**Respiratory Protection** Not normally needed. But if significant exposures are possible then the following respirator is recommended:

Dust/mist respirator. (N95, P2/P3)

**Hand Protection** Impervious rubber gloves.

**Skin Protection** Normal work coveralls.

**Eye Protection** Wear safety glasses or goggles to protect against exposure.

**Other Precautions** None known.

**9. Physical and Chemical Properties**

**9.1. Information on basic physical and chemical properties**

<b>Physical State:</b> Liquid	<b>Color</b>	Dark Brown
<b>Odor:</b> Pungent	<b>Odor</b>	No information available

<u>Property</u> <u>Remarks/ - Method</u>	<u>Threshold:</u> <u>Values</u>
<b>pH:</b>	6.5-8
<b>Freezing Point / Range</b>	No data available
<b>Melting Point / Range</b>	No data available
<b>Boiling Point / Range</b>	No data available
<b>Flash Point</b>	> 93 °C / > 200 °F PMCC
<b>Flammability (solid, gas)</b>	No data available
Upper flammability limit	No data available
Lower flammability limit	No data available
<b>Evaporation rate</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Vapor Density</b>	No data available
<b>Specific Gravity</b>	1.17
<b>Water Solubility</b>	Soluble in water
<b>Solubility in other solvents</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>Explosive Properties</b>	No information available
<b>Oxidizing Properties</b>	No information available
<b>9.2. Other information</b>	
<b>VOC Content (%)</b>	No data available
<b>Liquid Density</b>	9.75 lbs/gal @ 20 C
<b>Bulk Density</b>	72.9 lbs/ft <sup>3</sup> @ 20 C

## 10. Stability and Reactivity

### 10.1. Reactivity

Not expected to be reactive.

### 10.2. Chemical stability

Stable

### 10.3. Possibility of hazardous reactions

Will Not Occur

### 10.4. Conditions to avoid

None anticipated

### 10.5. Incompatible materials

Strong oxidizers.

### 10.6. Hazardous decomposition products

Carbon monoxide and carbon dioxide.

## 11. Toxicological Information

### 11.1 Information on likely routes of exposure

Principle Route of Exposure      Eye and skin contact.

### 11.2 Symptoms related to the physical, chemical and toxicological characteristics

#### Acute Toxicity

Inhalation                              None known.

**Eye Contact** None known.  
**Skin Contact** None known.  
**Ingestion** Large doses may cause nausea, vomiting and diarrhea.

**Chronic Effects/Carcinogenicity** No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

### 11.3 Toxicity data

#### Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	No data available	No data available	No data available

Substances	CAS Number	Skin corrosion/irritation
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	Serious eye damage/irritation
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	Skin Sensitization
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	Respiratory Sensitization
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	Mutagenic Effects
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	Carcinogenic Effects
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	Reproductive toxicity
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	STOT - single exposure
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	STOT - repeated exposure
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	Aspiration hazard
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

## 12. Ecological Information

### 12.1. Toxicity

#### Product Ecotoxicity Data

No data available

#### Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	No information available	No information available	No information available	No information available

### 12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	No information available

### 12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	No information available

### 12.4. Mobility in soil

Substances	CAS Number	Mobility
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	No information available

### 12.5 Other adverse effects

No information available

**13. Disposal Considerations**

**13.1. Waste treatment methods**

**Disposal methods** Disposal should be made in accordance with federal, state, and local regulations.  
**Contaminated Packaging** Follow all applicable national or local regulations.

**14. Transport Information**

**Canadian TDG**

**UN Number** Not restricted  
**UN proper shipping name:** Not restricted  
**Transport Hazard Class(es):** Not applicable  
**Packing Group:** Not applicable  
**Environmental Hazards:** Not applicable

**US DOT**

**UN Number** Not restricted  
**UN proper shipping name:** Not restricted  
**Transport Hazard Class(es):** Not applicable  
**Packing Group:** Not applicable  
**Environmental Hazards:** Not applicable

**IMDG/IMO**

**UN Number** Not restricted  
**UN proper shipping name:** Not restricted  
**Transport Hazard Class(es):** Not applicable  
**Packing Group:** Not applicable  
**Environmental Hazards:** Not applicable

**IATA/ICAO**

**UN Number** Not restricted  
**UN proper shipping name:** Not restricted  
**Transport Hazard Class(es):** Not applicable  
**Packing Group:** Not applicable  
**Environmental Hazards:** Not applicable

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable

**Special Precautions for User** None

**15. Regulatory Information**

**Canadian Regulations**

**Canadian Domestic Substances List (DSL)** All components listed on inventory or are exempt.

**US Regulations**

**US TSCA Inventory** All components listed on inventory or are exempt.

**TSCA Significant New Use Rules - S5A2**

Substances	CAS Number	TSCA Significant New Use Rules - S5A2
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	Not applicable

**EPA SARA Title III Extremely Hazardous Substances**

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	Not applicable

**EPA SARA (311,312) Hazard Class**

None

**EPA SARA (313) Chemicals**

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	Not applicable	Not applicable

**EPA CERCLA/Superfund Reportable Spill Quantity**

Substances	CAS Number	CERCLA RQ
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	Not applicable

**EPA RCRA Hazardous Waste Classification**

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

**NFPA Ratings:** Health 1, Flammability 1, Reactivity 0  
**HMIS Ratings:** Health 1, Flammability 1, Physical Hazard 0, PPE: B

**16. Other information****Preparation Information**

**Prepared By** Chemical Stewardship  
 Telephone: 1-281-871-6107  
 e-mail: fdunexchem@halliburton.com

**Revision Date:** 14-Feb-2017

**Reason for Revision** SDS sections updated:  
1

**Additional information**

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

bw – body weight  
 CAS – Chemical Abstracts Service  
 EC50 – Effective Concentration 50%  
 ErC50 – Effective Concentration growth rate 50%  
 LC50 – Lethal Concentration 50%  
 LD50 – Lethal Dose 50%  
 LL50 – Lethal Loading 50%  
 mg/kg – milligram/kilogram  
 mg/L – milligram/liter  
 NIOSH – National Institute for Occupational Safety and Health  
 NTP – National Toxicology Program  
 OEL – Occupational Exposure Limit  
 PEL – Permissible Exposure Limit



ppm – parts per million  
STEL – Short Term Exposure Limit  
TWA – Time-Weighted Average  
UN – United Nations  
h - hour  
mg/m<sup>3</sup> - milligram/cubic meter  
mm - millimeter  
mmHg - millimeter mercury  
w/w - weight/weight  
d - day

**Key literature references and sources for data**

[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)

**Disclaimer Statement**

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**End of Safety Data Sheet**